

## **AMENDMENTS TO THE SPECIFICATION**

At page 1, line 2, please add the following:

### **CROSS-REFERENCE TO RELATED APPLICATION**

At page 1, line 7, please add the following:

### **BACKGROUND OF THE INVENTION**

1. Technical Field:

At page 1, line 10, please add the following:

2. Discussion of Related Art:

At page 1, line 13, please add the following:

### **SUMMARY OF THE INVENTION**

At page 2, line 10, please add the following:

### **BRIEF DESCRIPTION OF THE DRAWINGS**

At page 3, line 3, please add the following:

### **DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS**

At page 21, please delete the Abstract and replace it as follows:

~~A video editing system or tool for E-commerce utilizing augmented reality (AR) technology combines real and virtual worlds together to provide an interface for a user to sense~~

and interact with virtual objects in the real world. The AR video editing system is usable in conjunction with an ordinary desktop computer and a low cost parallel port camera. A known camera calibration algorithm is utilized together with a set of specially designed markers for camera calibration and pose estimation of the markers. OpenGL and VRML (Virtual Reality Modeling Language) for 3D virtual model rendering and superimposition, are utilized. Marker-based calibration is utilized to calibrate the camera and estimate the pose of the markers in the AR video editing system. The system comprises video input/output, image feature extraction and marker recognition, camera calibration/pose estimation, and virtual reality (VR) model rendering/augmentation. This allows a sales person to create and edit customized AR video for product presentation and advertisement. In the video, the sales person can present different aspects of the product while keeping eye-to-eye contact with customers. The system is capable of providing a user with real time augmented reality feedback while recording a video. The augmented videos can be made available on E-Commerce Web sites or they can be emailed to customers. Because of the real time editing capability, the AR video can be directly broadcast on the Internet, for example, for an E-commerce advertisement. Inserted virtual objects can be hyper linked to product specification WebPages providing more detailed product and price information.

A computer-implemented method for producing an augmented reality video includes providing video data including images of a model plane having markers, providing a three-dimensional image data model of a product, determining a pose of the model plane according to the markers in the video data, determining an image correspondence between the model plane having markers and the three-dimensional image data model, and producing the augmented

reality video by rendering the three-dimensional image data model of the product superimposed on the model plane in the video data and having the pose of the model plane.